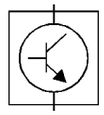
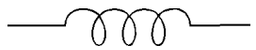
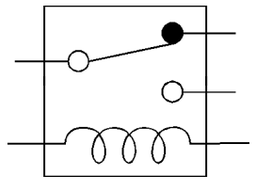
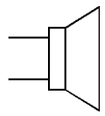
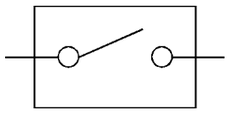
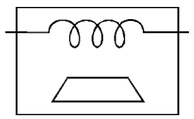
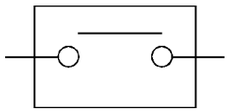
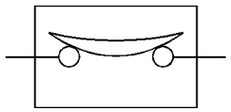
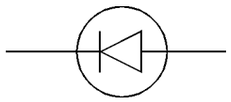
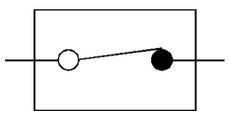
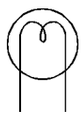
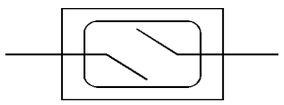
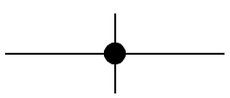
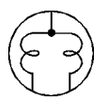
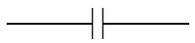
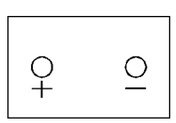
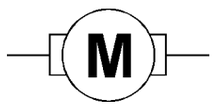
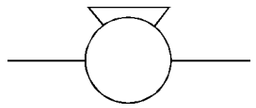
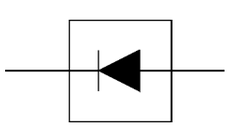
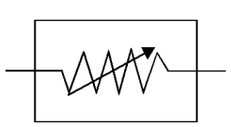
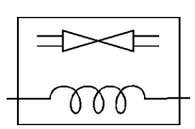
SYMBOLS

Symbol	Meaning	Symbol	Meaning	Symbol	Meaning
	Fuse		Electronic Parts		Coil (Inductor), Solenoid Magnetic Valve
	Fusible Link		Resistor		Relay
	Fusible Link Wire		Speaker		
	Switch		Buzzer		Connector
	Switch		Circuit Breaker		Light Emitting Diode
	Switch (Normal Close Type)		Bulb		Reed Switch
	Contact Wiring		Double Filament Bulb		Condenser
	Battery		Motor		Horn
	Diode		Variable Resistor Rheostat		Vacuum Switching Valve

ABBREVIATIONS

Abbreviation	Definition	Abbreviation	Definition
A	Ampere (S)	kW	kilowatt
ABS	Anti-lock Brake System	LH	Left Hand
ASM	Assembly	LWB	Long Wheel Base
AC	Alternating Current	M/T	Manual Transmission
A/C	Air Conditioner	OD	Over Drive
ACC	Accessories	OPT	Option
A/T	automatic Transmission	QOS	Quick on Start
C/B	Circuit Breaker	RH	Right Hand
CSD	Cold Start Device	RR	Rear
DIS	Direct Ignition System	RWAL	Rear Wheel Anti-Lock Brake System
EBCM	Electronic Brake Control Module	ST	Start
ECGI	Electronic Control Gasoline Injection	STD	Standard
ECM	Electronic Control Module	SW	Switch
ECU	Electronic Control Unit	SWB	Short Wheel Base
EFE	Early Fuel Evaporation	TCM	Transmission Control Module
4A/T	4-Speed Automatic Transmission	3A/T	3-Speed Automatic Transmission
4 X 4	Four-Wheel Drive	V	Volt
FL	Fusible Link	VSV	Vacuum Switching Valve
FRT	Front	W	Watt (S)
H/L	Headlight	WOT	Wide Open Throttle
IC	Integrated Circuit	W/	With
IG	Ignition	W/O	Without

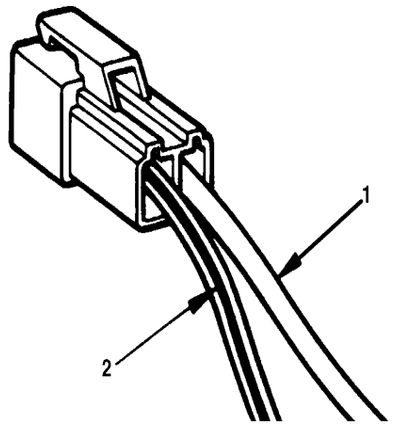
WIRING

Wire Color

All wires have color-coded insulation. Wires belonging to a system's main harness will have a single color. Wires belonging to a system's sub-circuits will have a colored stripe. Striped wires use the following code to show wire size and colors.

Example: 0.5 G / R

- R — Red (Stripe Color)
- G — Green (Base Color)
- 0.5 — Wire Size (0.5 mm2)



1. Single Color Wire
2. Colored Stripe Wire

Abbreviations are used to indicate wire color within a circuit diagram. Refer to the following table

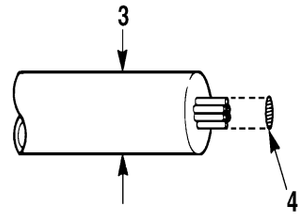
Color-Coding	Meaning	Color-Coding	Meaning
B	Black	BR	Brown
W	White	LG	Light Green
R	Red	GR	Grey
G	Green	P	Pink
Y	Yellow	LB	Light Blue
L	Blue	V	Violet
O	Orange		

Distinction of Circuit by Wire Base Color

Base Color	Circuits	Base Color	Circuits
B	Starter Circuit	Y	Instrument Circuit
W	Charging Circuit	L, O, BR, LG, GR, P, LB, V	Other Circuits
R	Lighting Circuit		
G	Signal Circuits		

Wire Size

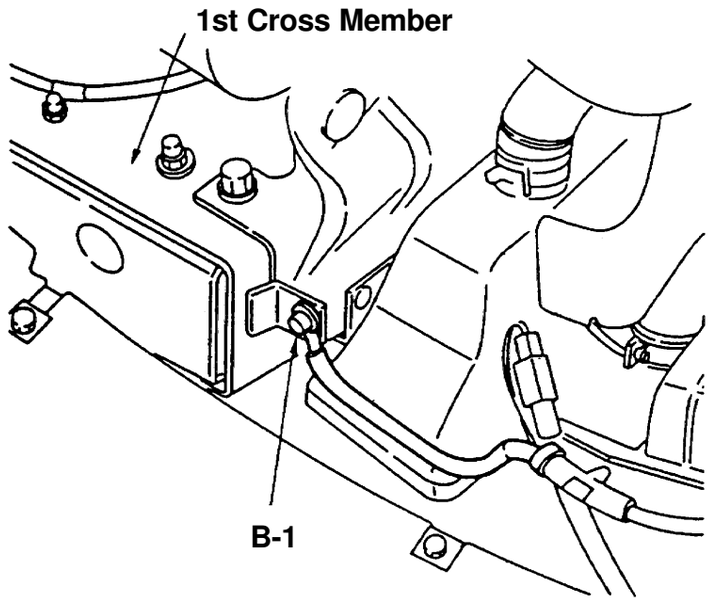
The size of wire used in a circuit is determined by the amount of current (amperage), the length of the circuit, and the voltage drop allowed. The following wire size and load capacity, are specified by AWG (American Wire Gauge) (Nominal size means approximate cross sectional area).

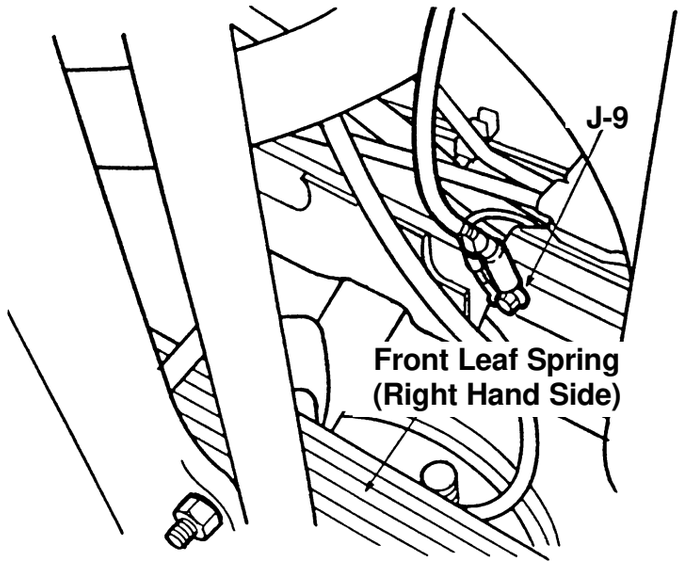


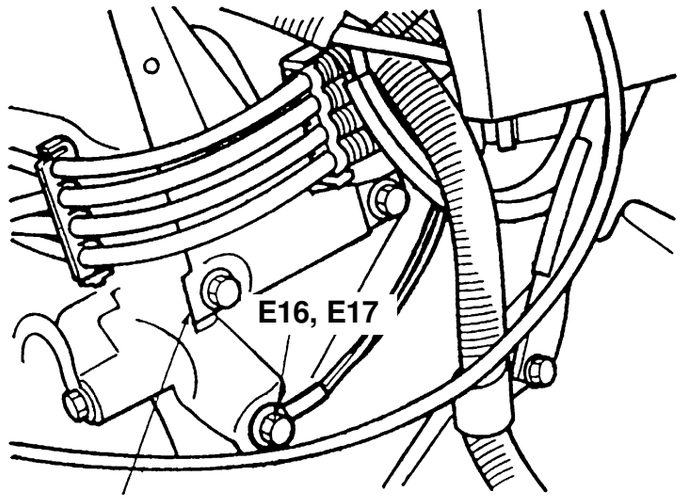
3. Outside Diameter
4. Cross Sectional Area

Nominal Size	Cross Sectional Area (mm^2)	Outside Diameter (mm)	Allowable Current (A)	AWG Size (Cross Reference)
0.3	0.372	1.8	9	22
0.5	0.563	2.0	12	20
0.85	0.885	2.2	16	18
1.25	1.287	2.5	21	16
2	2.091	2.9	28	14
3	3.296	3.6	37.5	12
5	5.227	4.4	53	10
8	7.952	5.5	67	8
15	13.36	7.0	75	6
20	20.61	8.2	97	4

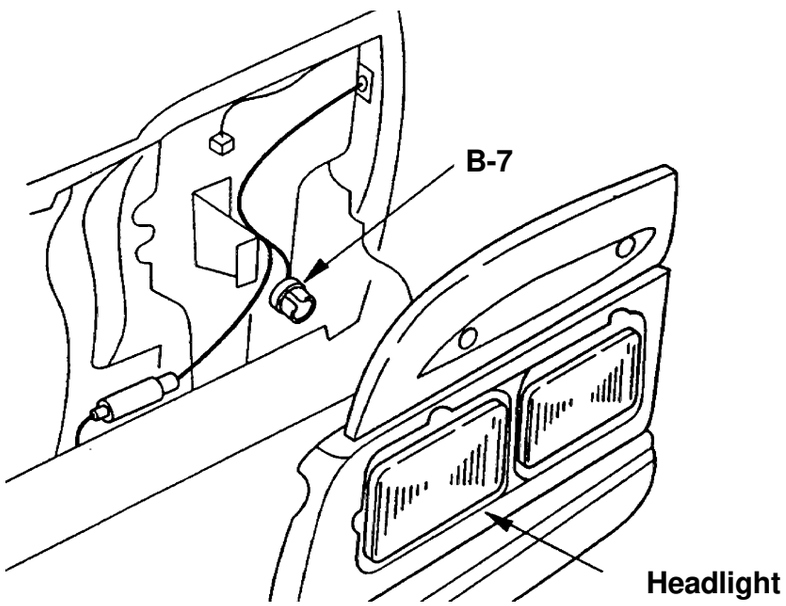
GROUNDING POINT LOCATION

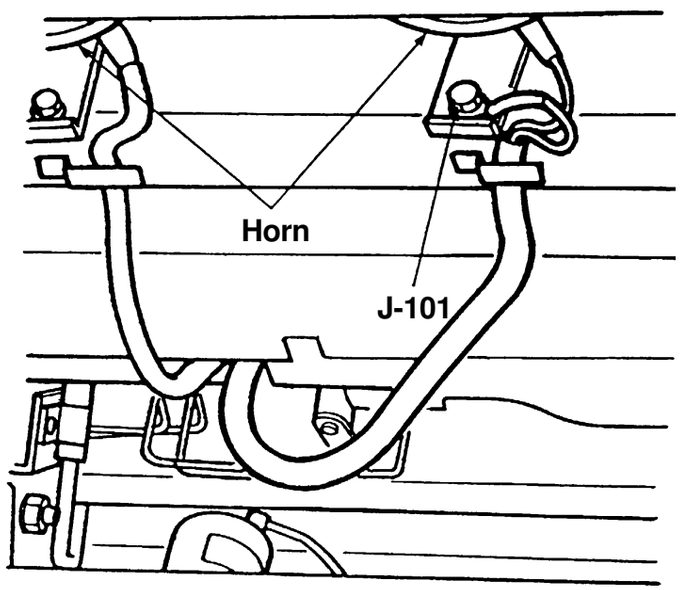






Engine (Rear Left Hand Side)



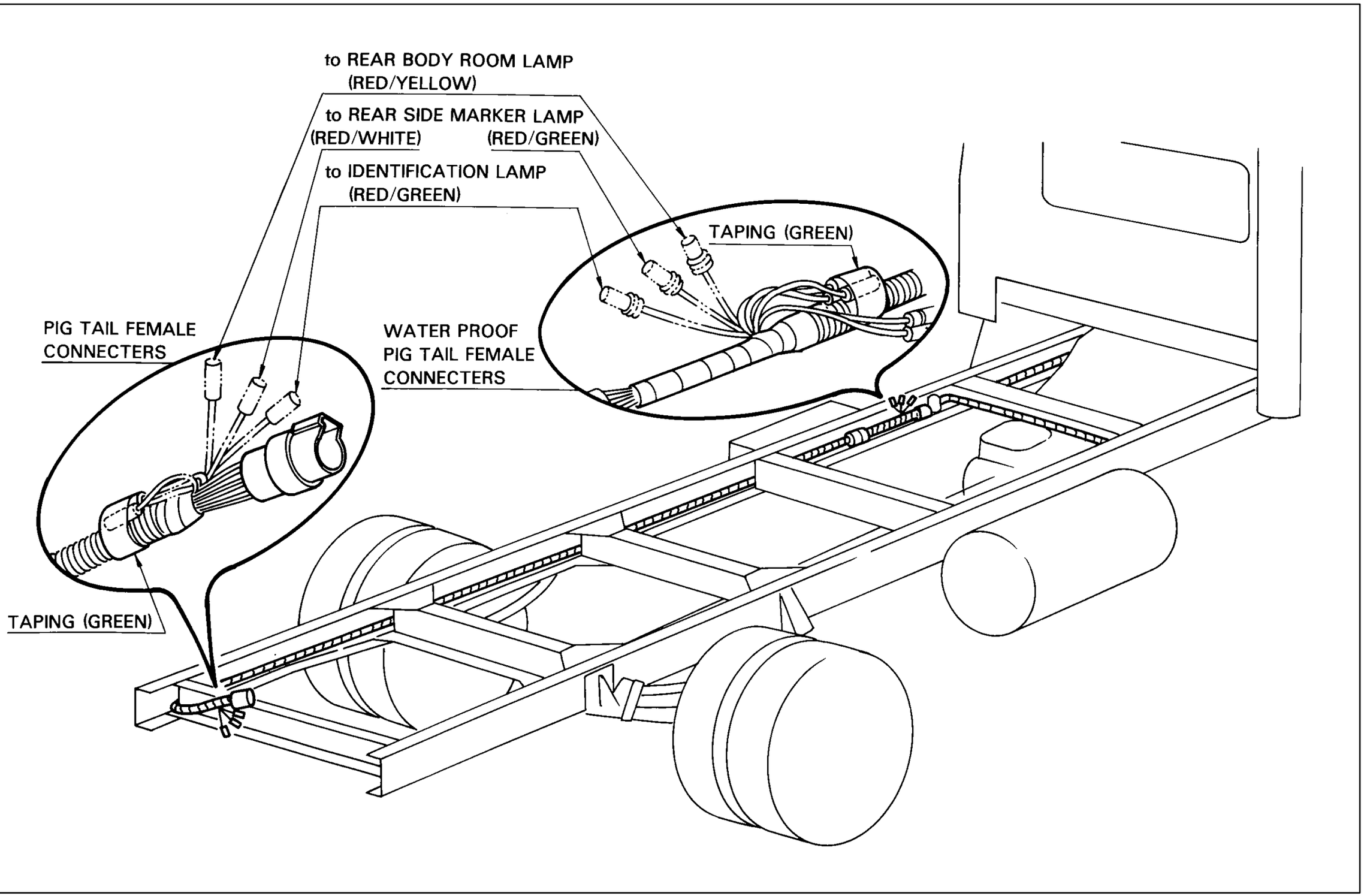


REFERENCE TABLE OF GROUNDING POINT

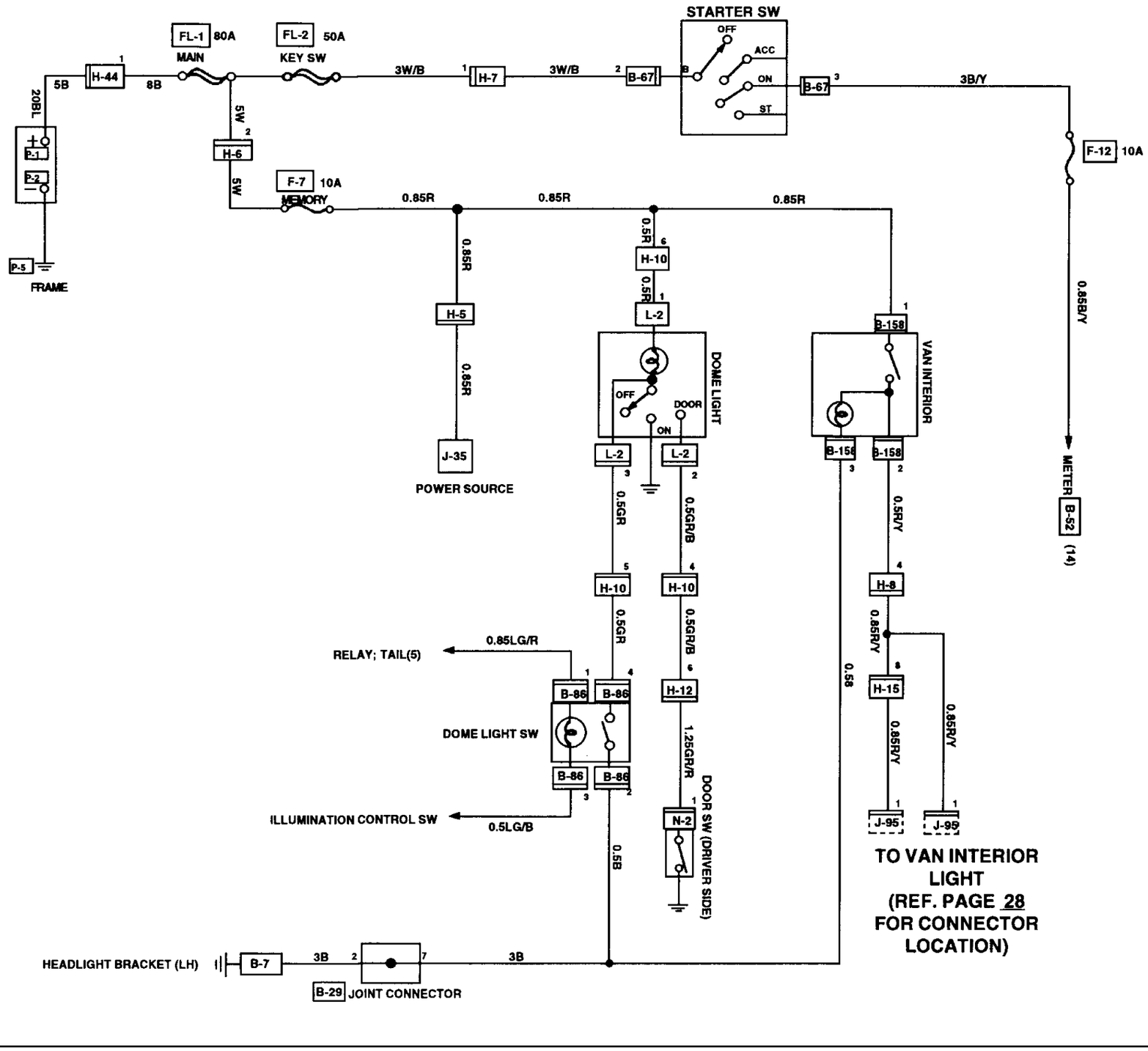
NOTICE: Abnormal phenomena of electrical components are considered resulted from defective grounding. In repair, be sure to inspect grounding points and to tighten all fastening parts surrounding the grounding points.

Connector No.	Cable Harness Name	Location	Main Parts (Load)
B-1		Frame-LH (FRT)	Turn signal indicator light, Meter, High beam indicator light, Fuel pump & fuel gauge sender, Digital ratio adapter
B-7	Body Harness	Headlight Bracket-LH	Change relay, dome light switch, Meter, Starter relay, Inhibitor switch, Lighting switch, Ignition relay, Front turn signal light, Data link connector, Brake fluid switch, Tail relay, Cornering light switch, Cornering light, Cornering light relay, Dimmer relay, Wiper motor, Washer motor, Intermittent relay, Heater & A/C relay, Radio & clock, Cigar lighter, Fan switch, Blower resistor, A/C switch, Blower motor, Electronic thermostat, Van interior switch, Flasher unit, Clearance light, ID light, Illumination, OD OFF switch, Power source relay
J-9	Frame Front Harness	Frame-RH (CRT)	Fuel tank & fuel gauge sender, Fuel pump relay, ID light relay
J-101	Frame Front Harness	Horn (LH)	Output vehicle speed sensor shield wire
E-38	Engine Harness	Engine-LH (RR)	Powertrain control module, EGR module
E-39	Engine Front Harness	Engine-LH (RR)	Power train control module

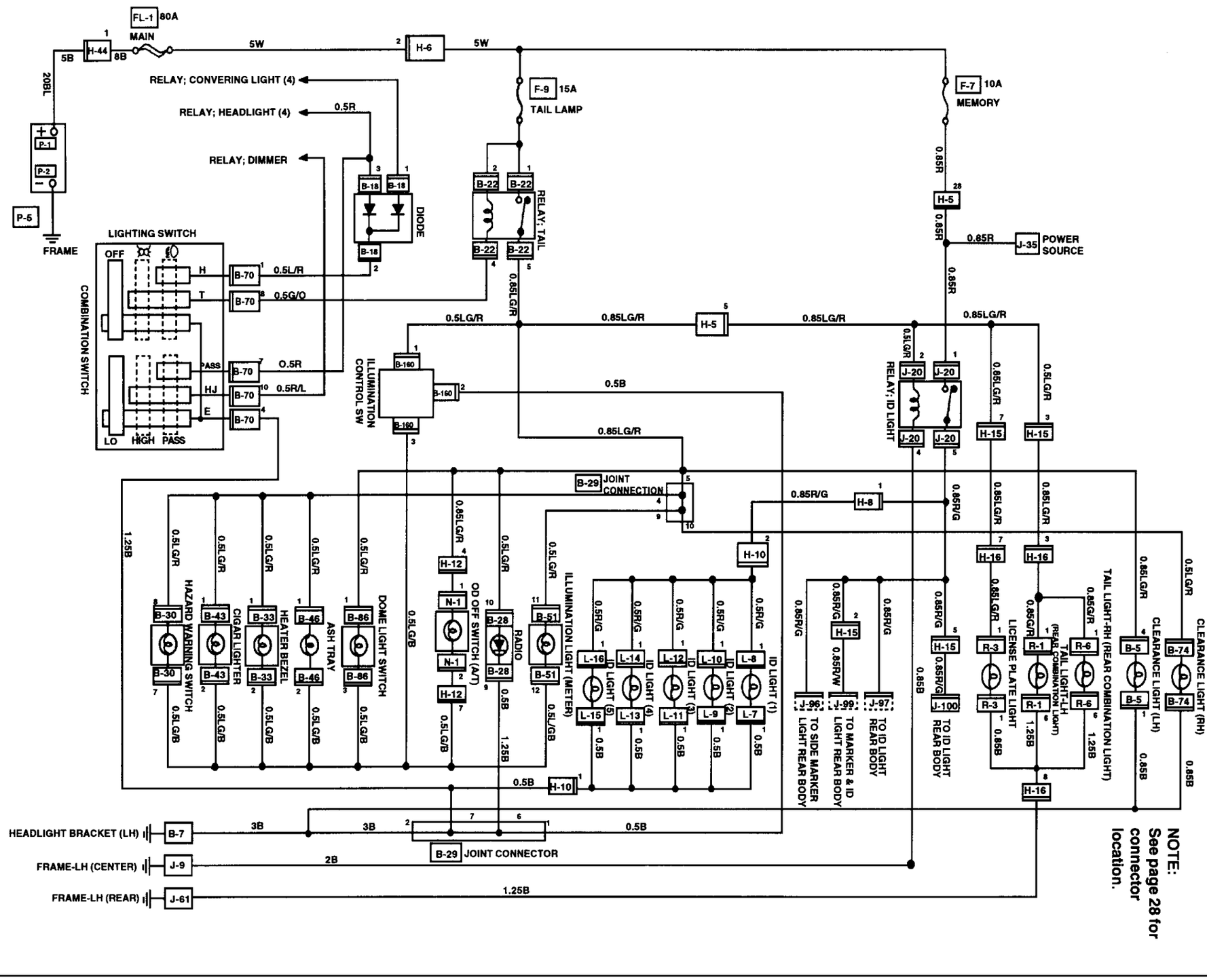
BODY ROOM LIGHT, ID & MARKER LAMP CONNECTOR LOCATION



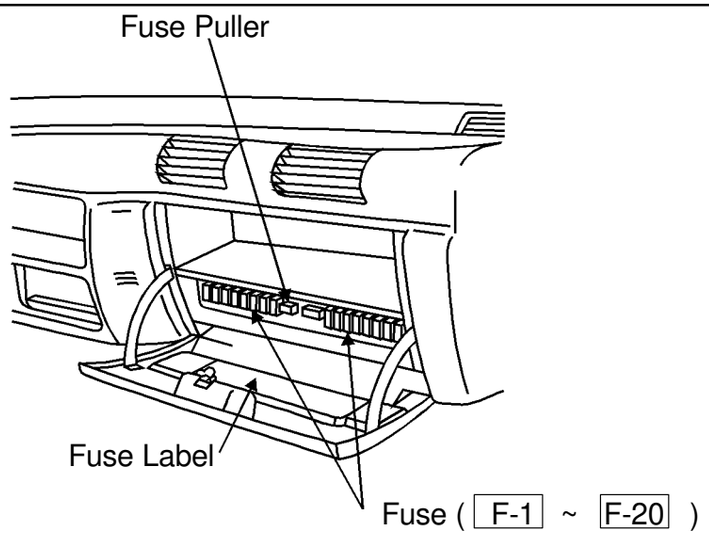
CIRCUIT DIAGRAM BODY ROOM LIGHT

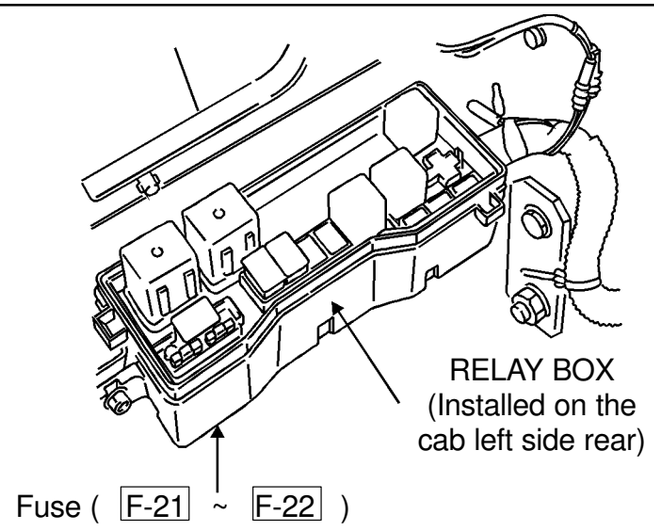


CIRCUIT DIAGRAM BODY ID & MARKER LAMPS



FUSE AND FUSIBLE LINK LOCATION





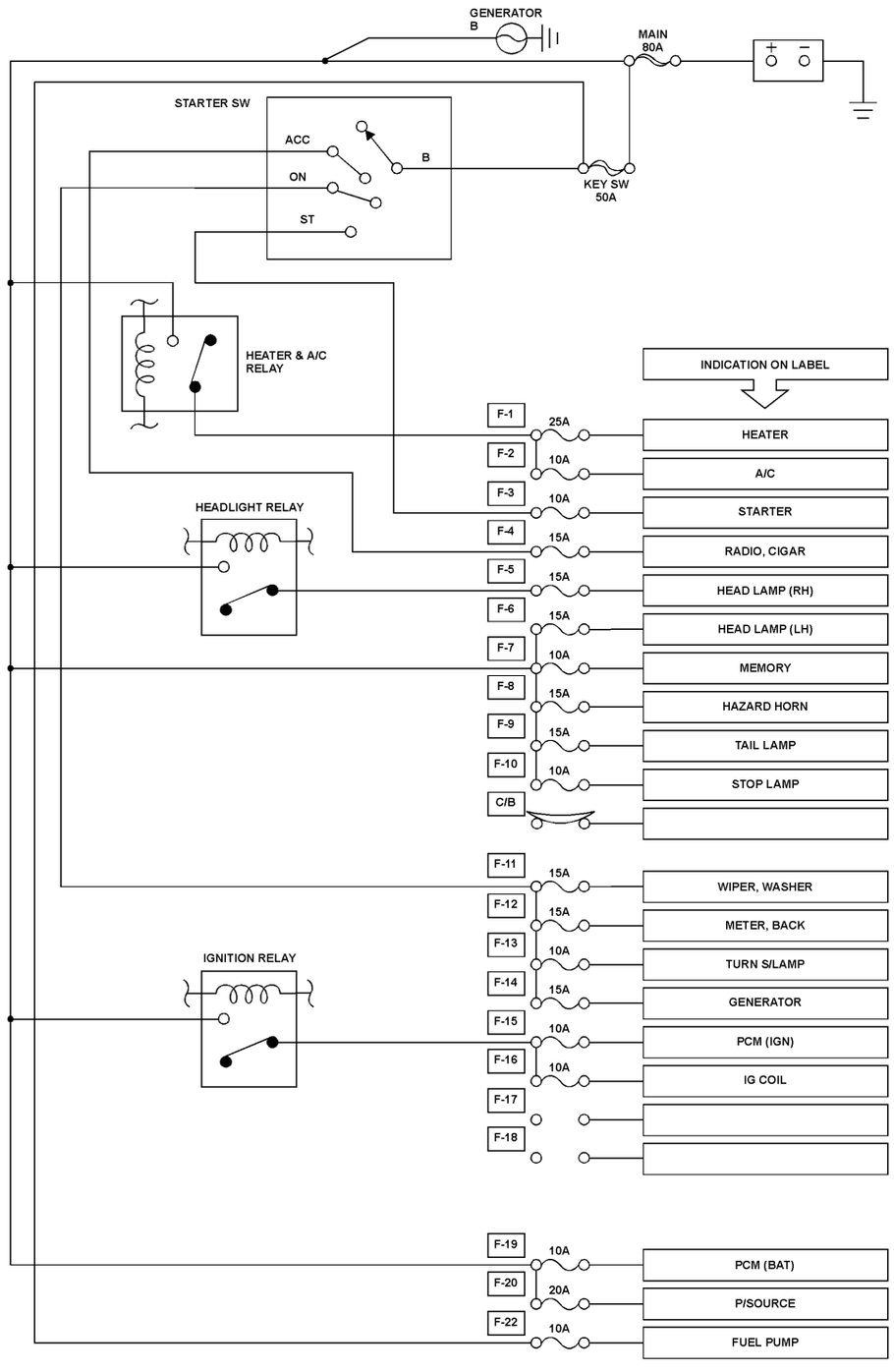
Fuse Label

Fuse	Label	Fuse	Label	Fuse	Label
25A (1)	HEATER	15A (11)	WIPER, WASHER	(F-21)	————————
10A (2)	AIR CONDITIONING	15A (12)	METER, BACK	10A (F-22)	FUEL PUMP
10A (3)	STARTER	10A (13)	TURN S/LAMP		
15A (4)	RADIO, CIGAR	15A (14)	GENERATOR		
15A (5)	HEAD LAMP (RH)	10A (15)	PCM (IGN)		
15A (6)	HEAD LAMP (LH)	10A (16)	IG. COIL		
10A (7)	MEMORY	(17)	————————		
15A (8)	HAZARD, HORN	(18)	————————		
15A (9)	TAIL LAMP	10A (19)	PCM (BAT)		
10A (10)	STOP LAMP	20A (20)	P/SOURCE		

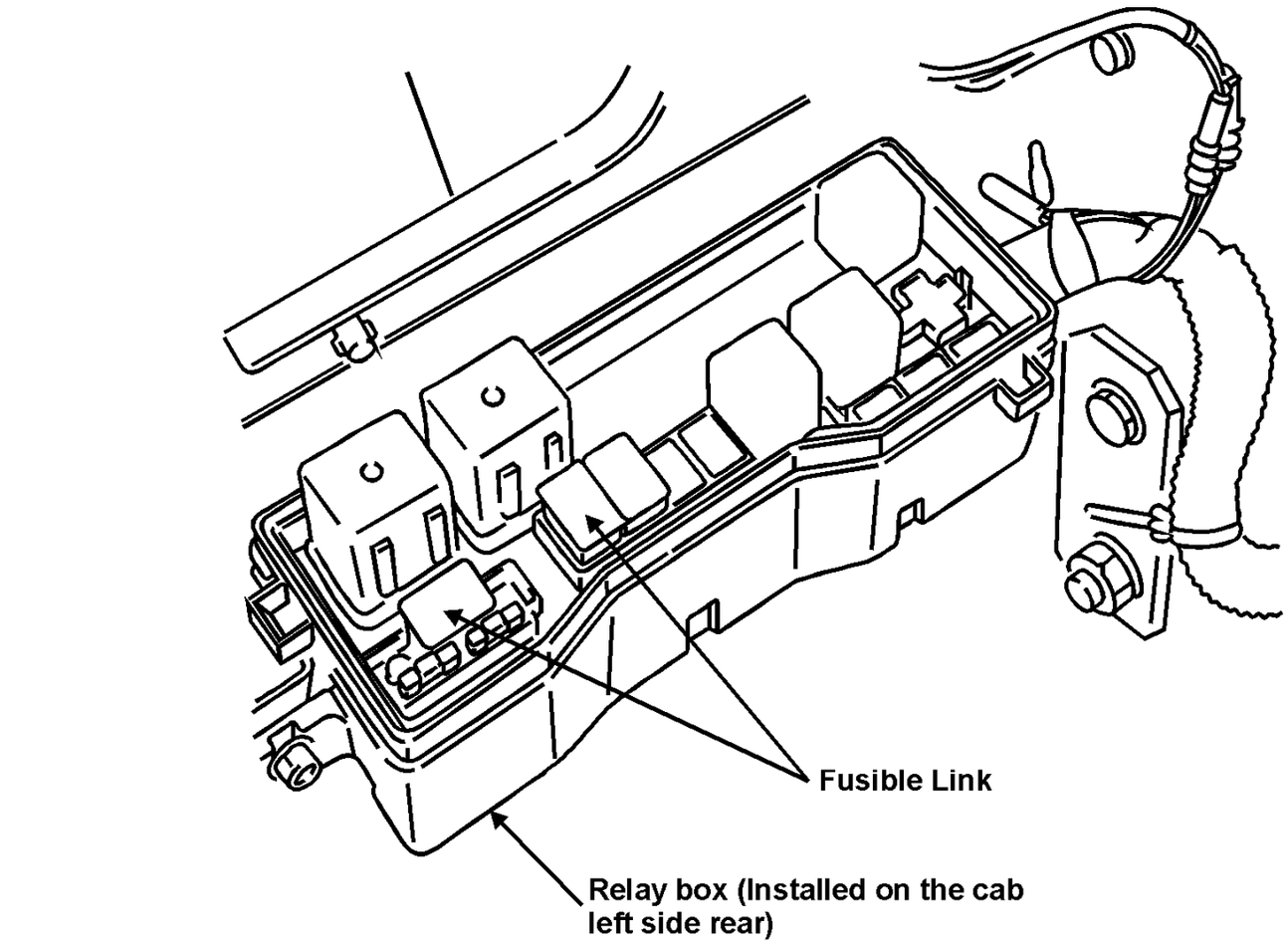
NOTICE: The fuse numbers (1) ~ (20) indicated on the fuse labels are expressed as F-1 ~ F-20 in the circuit diagrams of this manual

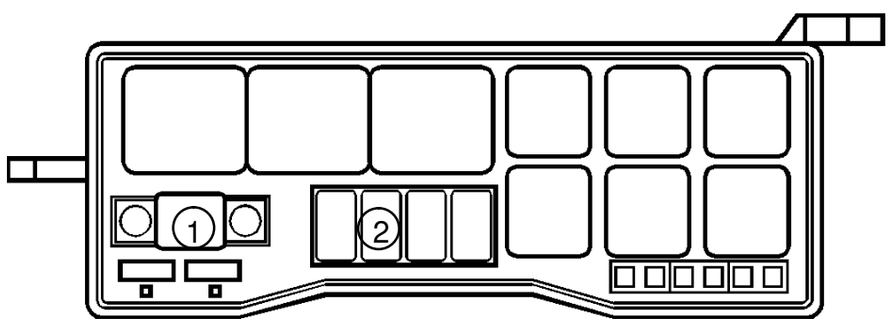
20A	BREAKER

FUSE BLOCK CIRCUIT



FUSIBLE LINK



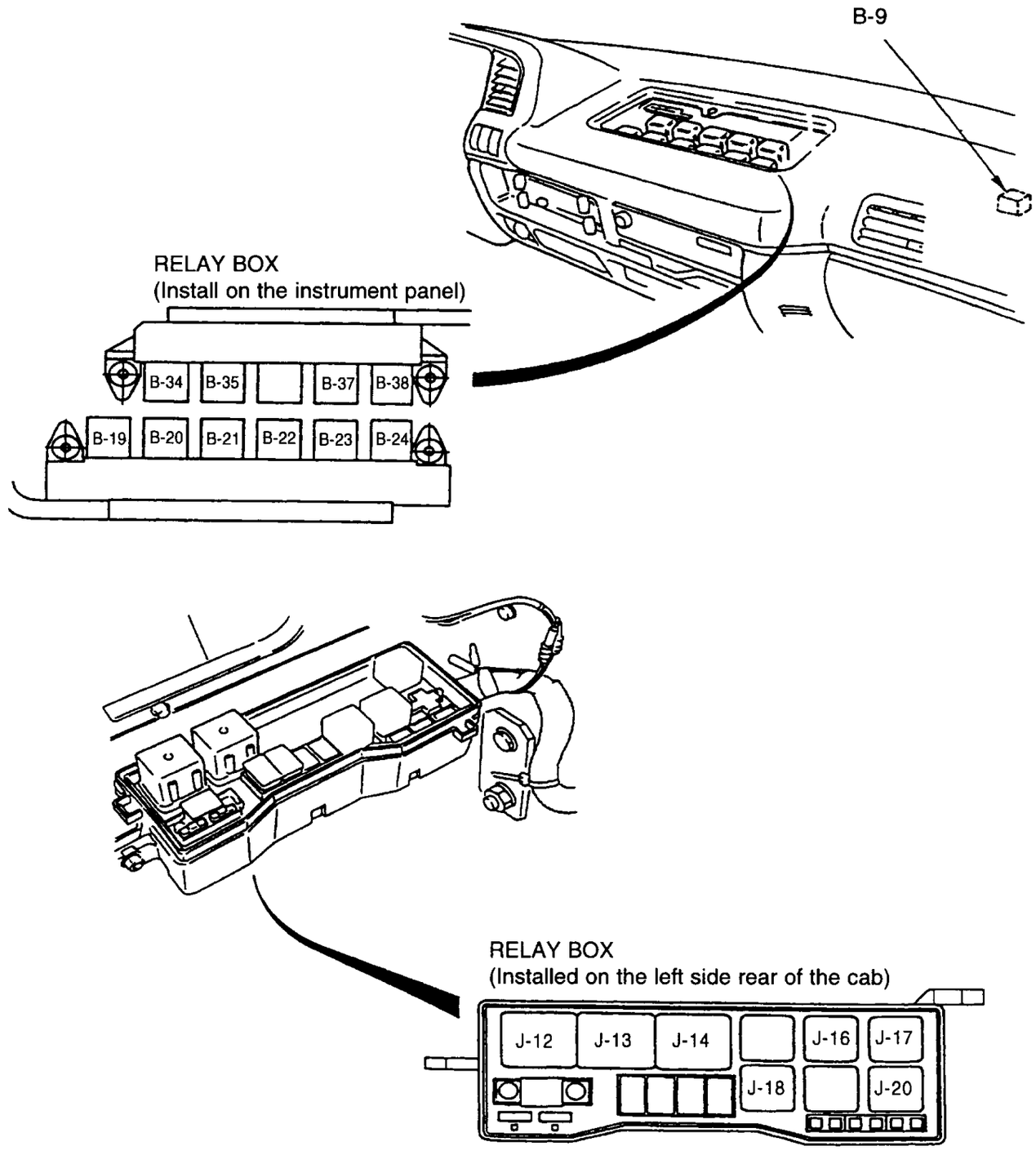


No.	Name	Capacity
①	MAIN	80A
②	KEY SW	50A

REFERENCE TABLE OF FUSE

Fuse No.	Capacity	Indication on Label	Main Parts (Load)
F-1	25A	HEATER	Blower motor, Blower resistor, Fan switch, A/C switch, A/C thermo relay, Pressure switch, Electronic thermostat
F-2	10A	AIR CONDITIONER	A/C switch, A/C thermo relay, Pressure switch, magnetic clutch, Electronic thermostat, Condenser fan relay
F-3	10A	STARTER	Starter relay, Inhibitor switch, QOS-III controller, Neutral switch
F-4	15A	RADIO, CIGAR	Cigar lighter, Radio, Power source relay
F-5	15A	HEAD LAMP (RH)	Headlight (RH), Dimmer relay, High beam indicator light
F-6	15A	HEAD LAMP (LH)	Headlight (LH), Dimmer relay, Cornering light relay, Cornering light, Cornering light switch
F-7	10A	MEMORY	Radio & clock, Dome light switch, Dome light, Door switch (LH), ID light relay, ID light, Van interior switch
F-8	15A	HAZARD, HORN	Hazard warning switch, Horn, Horn relay, Horn switch, Flasher unit
F-9	15A	TAIL LAMP	Tail relay, Illumination light(s), Lighting switch, Clearance light(s), Tail light(s), Illumination control switch, ID light relay
F-10	10A	STOP LAMP	Stoplight switch, Stoplight
F-11	15A	WIPER, WASHER	Wiper & Washer switch, Wiper motor, Washer motor, Intermittent relay
F-12	10A	METER, BACK	Exhaust brake control relay, Backup light switch, Backup light, Inhibitor switch, Neutral switch, QOS-III controller, Glow-1 relay, Glow-2 relay, Glow indicator (Meter), Coolant temperature gauge, Thermo unit, Vehicle speed sensor (Installed on the meter assembly & transmission), Meter assembly, Cornering light relay, Thermo switch (Fuel throttle) VSV: Fuel throttle, Idol switch Vacuum pump relay, Electronic vacuum pump
F-13	10A	ECU (IGN)	TCM
F-14	15A	FUEL HEATER	—
F-15	10A	EXH. BRAKE	Exhaust brake switch, Exhaust brake control relay, Exhaust brake magnetic valve, Clutch switch, Accel switch, Engine warming up switch, Engine warming cut relay, Thermo switch (Eng. warm)
F-16	10A	ECU (BAT)	TCM
F-17	10A	TURN S/LAMP	Flasher unit, Front turn signal light, Rear turn signal light, Turn signal light switch, Hazard warning switch
F-18	15A	GENERATOR	Generator, Charge relay, QOS-III controller, Exhaust brake relay
F-19	10A	ENG. STOP	Engine stop motor
F-20	20A	PISOURCE	Power source relay, Power source
F-21	—	—	—
F-22	15A	CONDENSER FAN	Condenser fan relay, Condenser fan

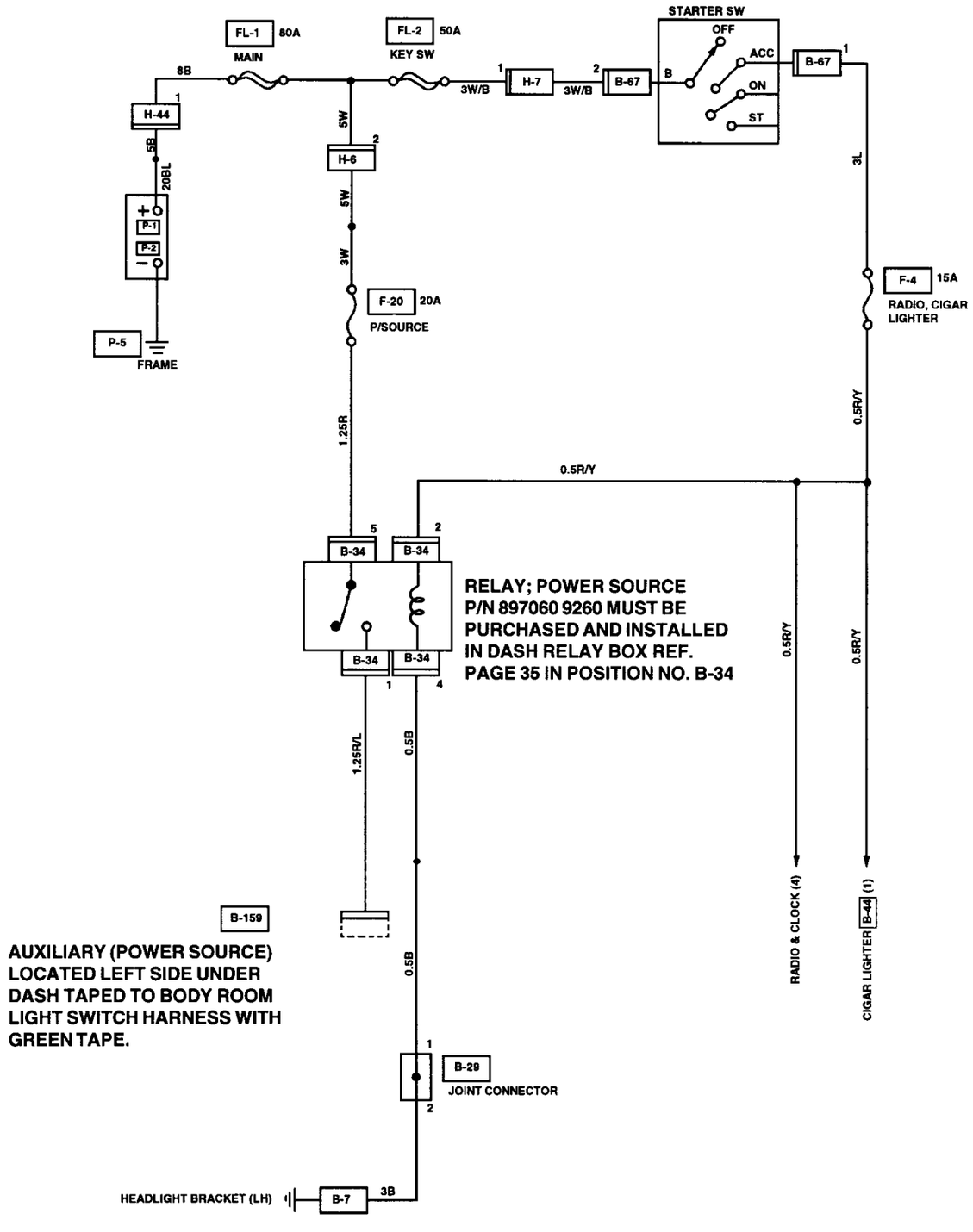
RELAY LOCATION



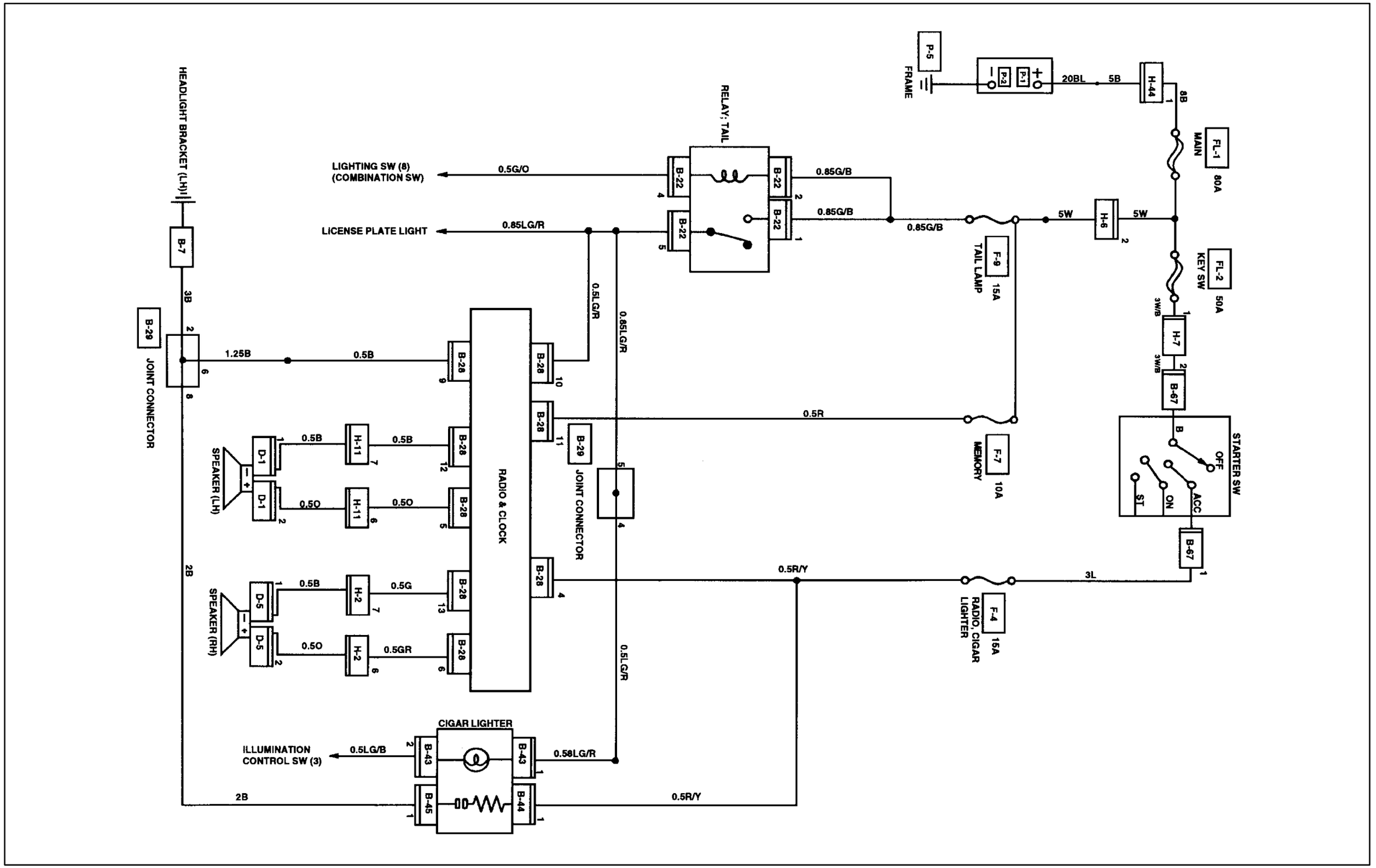
RELAY LIST

Connector No. Relay Name	B-9 Intermittent	B-19 Charge	B-20 Head light	B-21 Heater & A/C	B-22 Tail
Connector No. Relay Name	B-23 Dimmer	B-24 Horn	B-34 Aux. Power Source	B-35 Cornering Light	B-37 A/C Thermo
Connector No. Relay Name	B-38 Ignition	J-12 Starter	J-16 Fuel Pump	J-2ID Light	

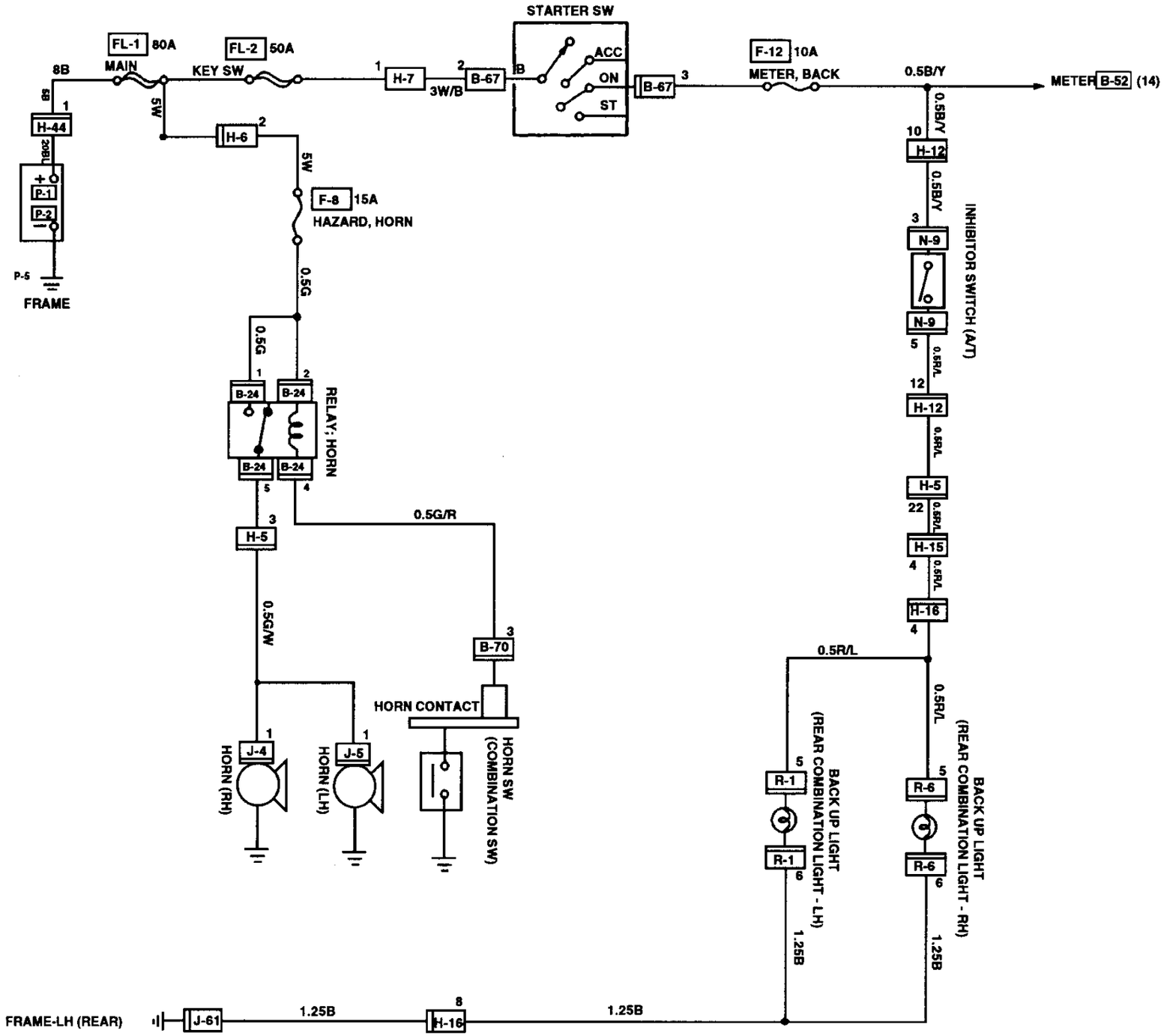
CIRCUIT DIAGRAM AUXILIARY POWER SOURCE



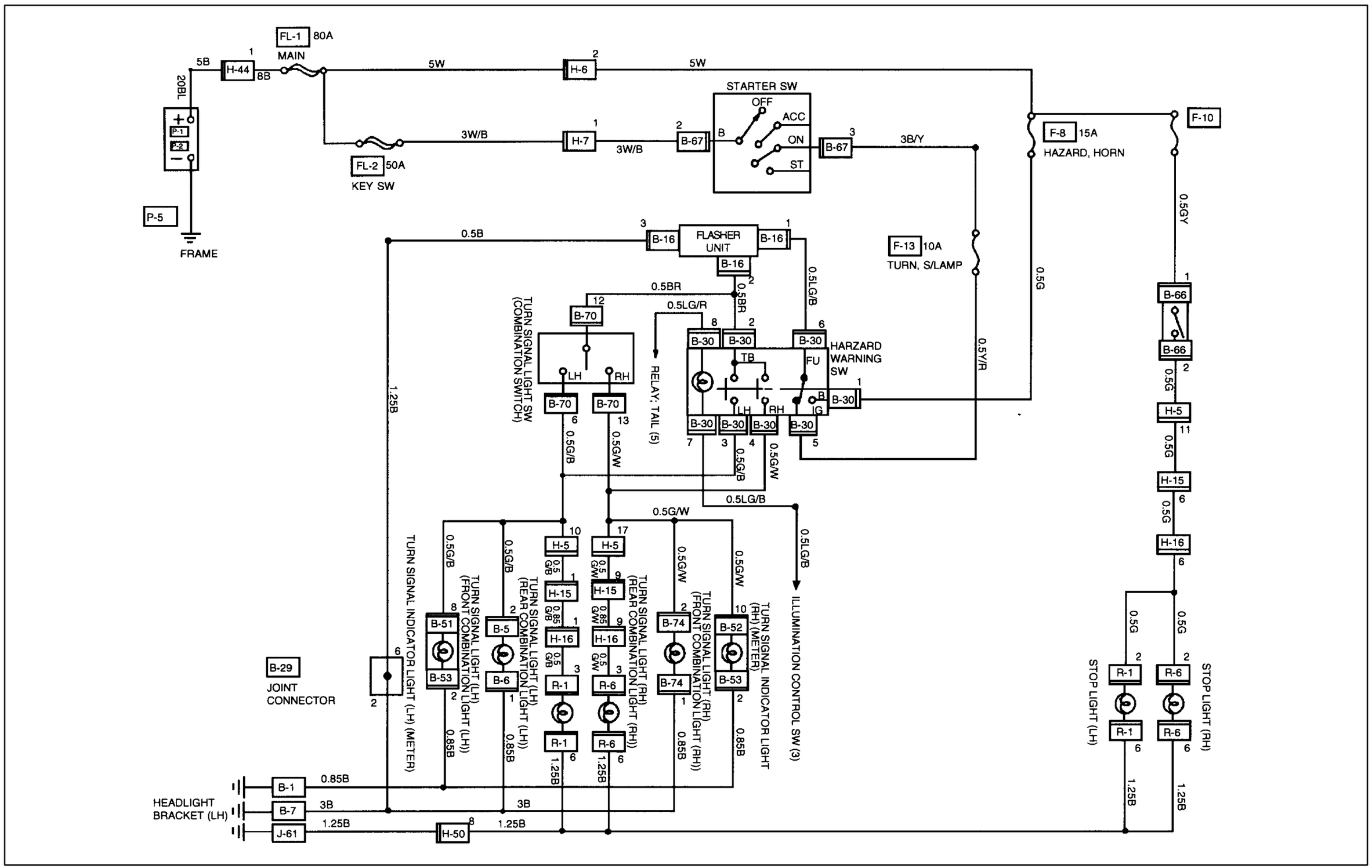
CIRCUIT DIAGRAM ACCESSORY WIRING



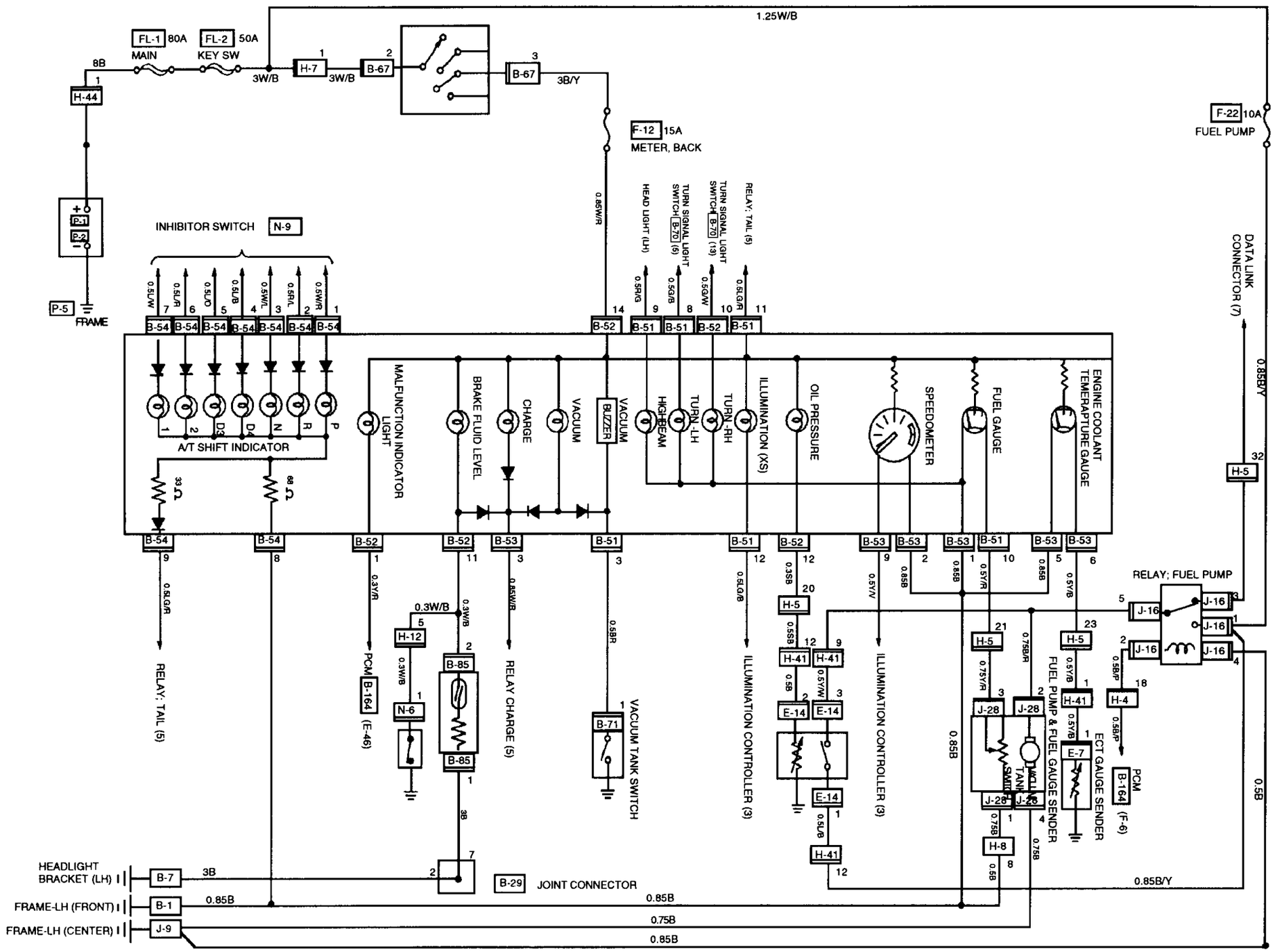
CIRCUIT DIAGRAM HORN & BACK–UP LIGHT



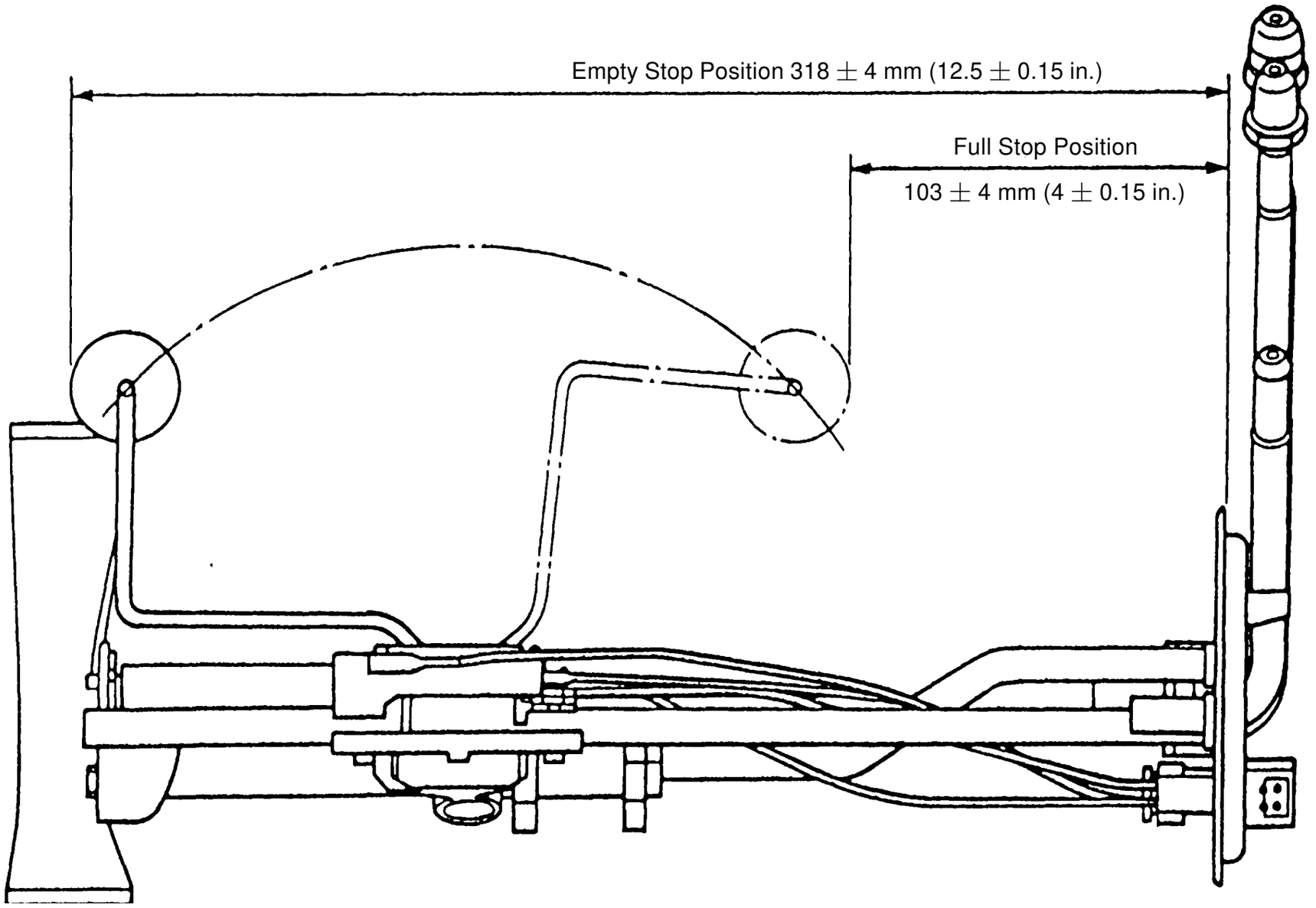
CIRCUIT DIAGRAM TURN SIGNAL, HAZARD & STOP LAMPS



CIRCUIT DIAGRAM INSTRUMENT PANEL

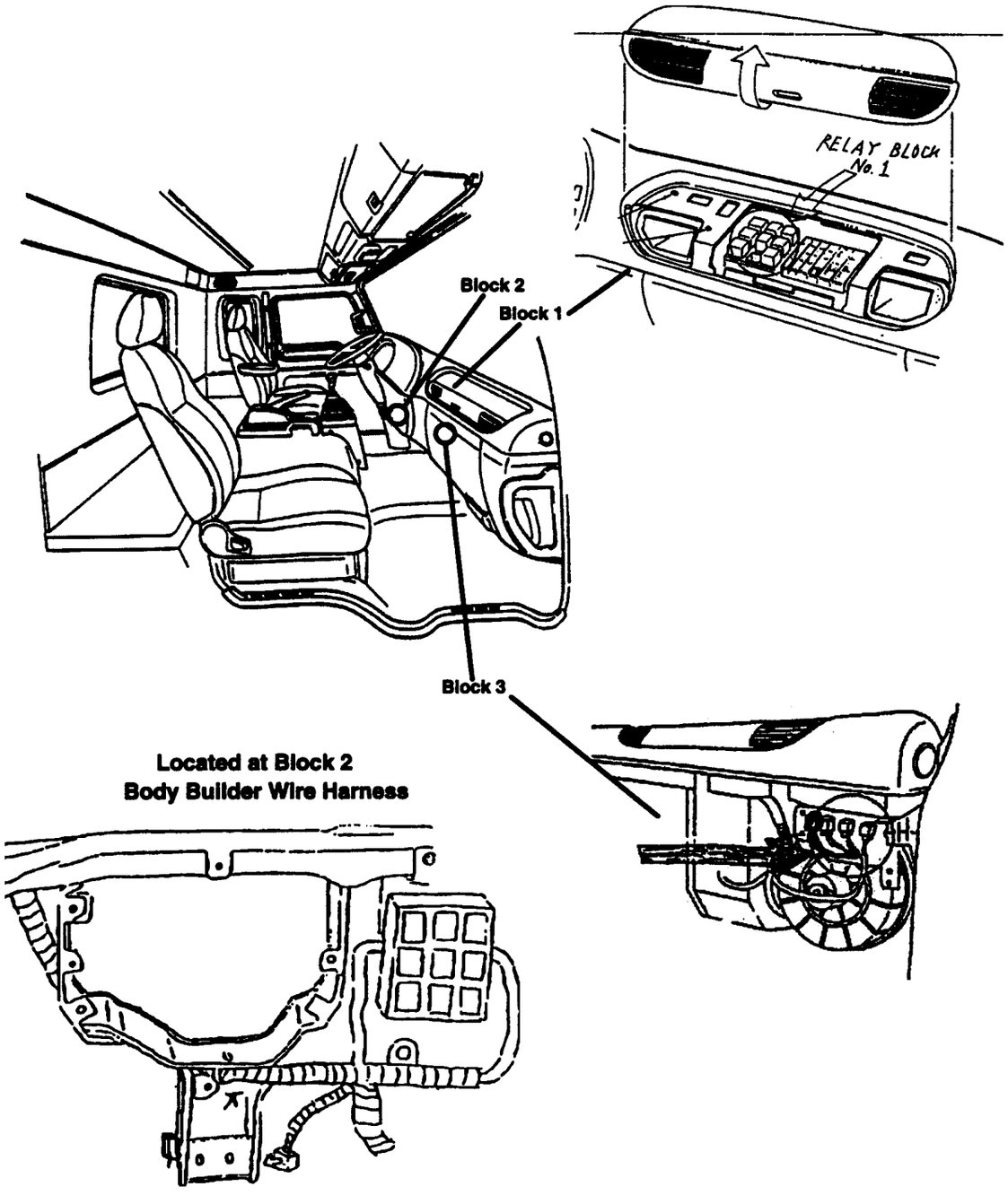


FUEL TANK SENDING UNIT RESISTANCE

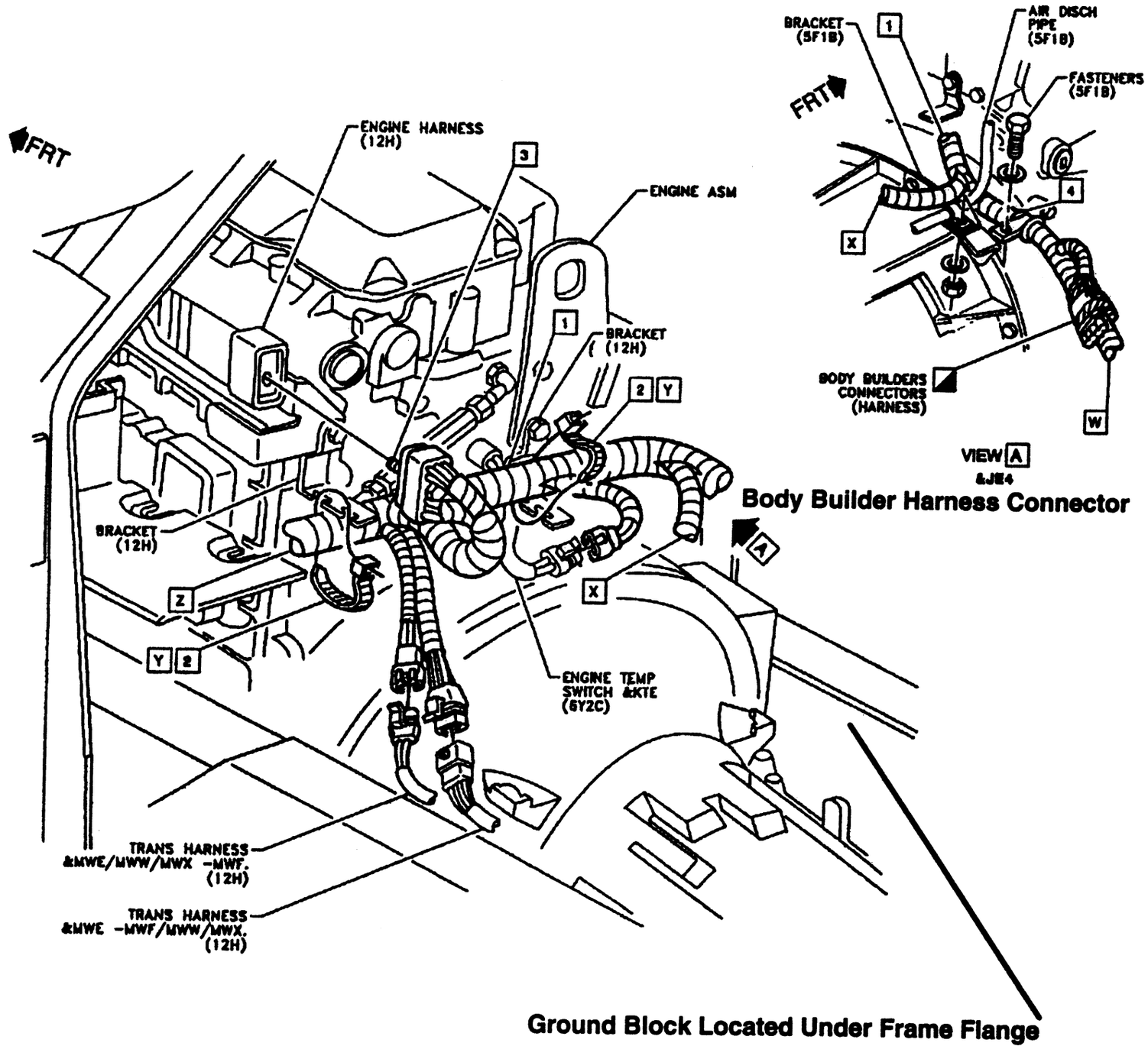


Float Position	Standard Resistance (Ω)
Empty Stop	110
Full Stop	3

F–SERIES RELAY LOCATION



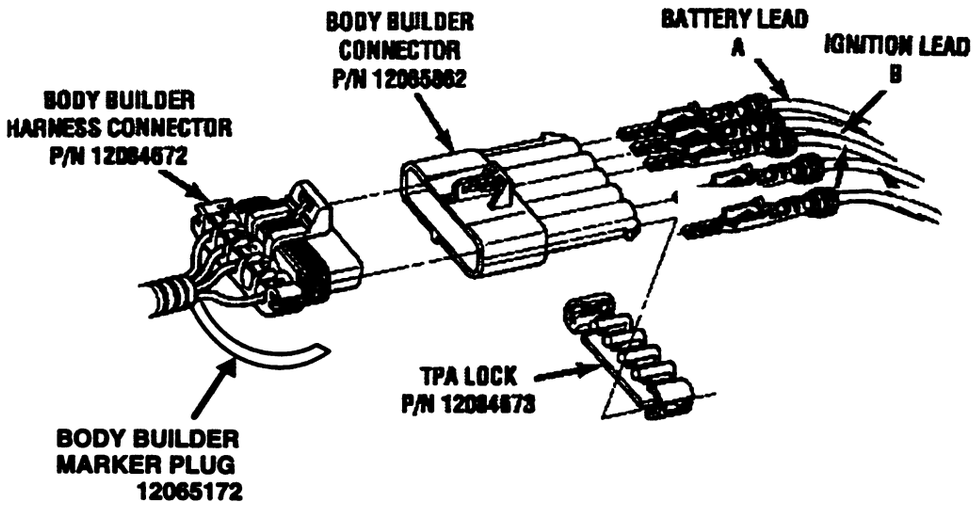
DEDICATED BODY BUILDER ELECTRICAL CIRCUITS BEHIND ENGINE FOR F–SERIES

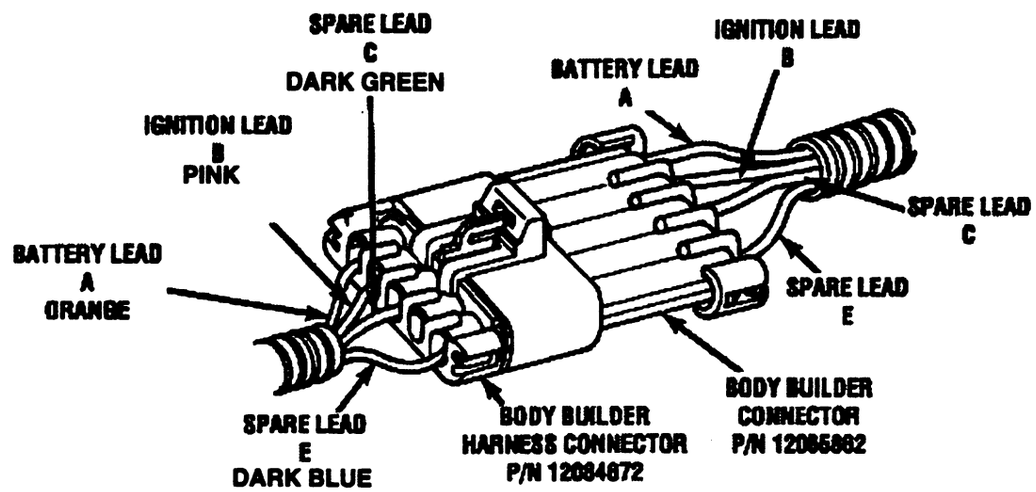


DEDICATED BODY BUILDER ELECTRICAL CIRCUITS BEHIND ENGINE FOR F–SERIES

Under the Cab Connection

Insert the terminated body builder leads into connector P/N 12065862 and install the TPA lock P/N 12084673. A body builder marker lead is standard on F–Series.





Connect the chassis harness connector and truck body harness connector together.

NOTE: The alphabetical locations are molded on the connectors.

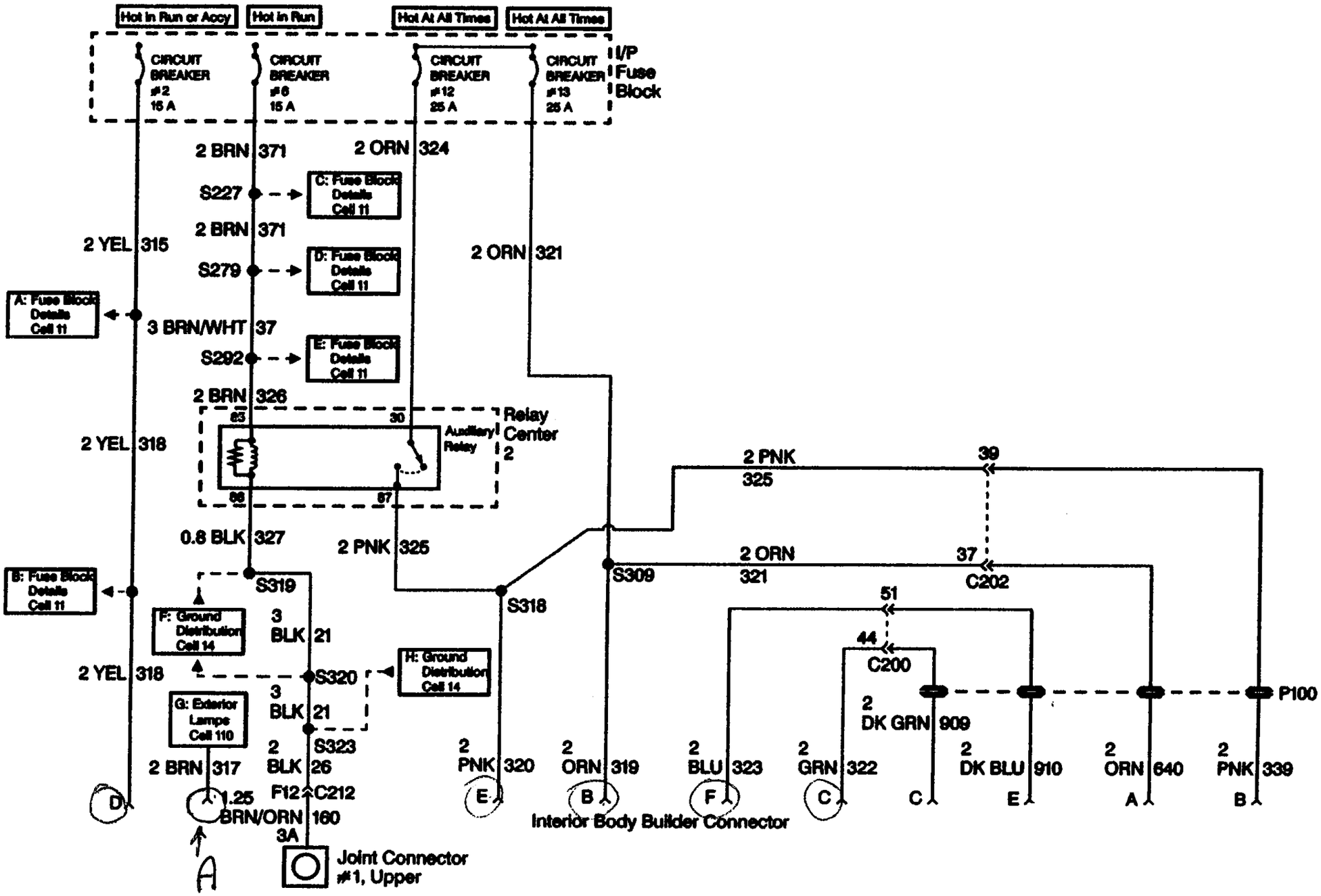
BODY–CHASSIS ELECTRICAL CONNECTORS

The wiring harnesses were designed for reliability, durability, and to simplify equipment installation for body builders and customers. All wires, connectors, and components are located for fast easy access. The electrical circuits that may be available for connecting to and their locations are as follows.

Circuit	Max. Load	Battery Fed	Ignition Switch	Headlamp Switch	Availability F–Series
Dedicated Body Builder Lead	15.0 Amps	X			2–Pickup Locations, In Cab and Under Cab Behind Engine
Dedicated Body Builder Lead	15.0 Amps		X		
Auxiliary Power	7.0 Amps		X		All Vehicles
Auxiliary Marker Lamp	7.0 Amps			X	All Vehicles
Cigar Lt. & Aux. Power Jacks	15.0 Amps	X			Vehicles w/o a Cigar Lighter or Auxiliary Power Jacks
Two–Speed Axle	20.0 Amps		X		Vehicles w/o Two–Speed Axle (Single Axle Only)
Air Dryer/Moisture Ejector	20.0 Amps		X		Vehicles w/o an Air Dryer/Moisture Ejector
Total	54.0 Amps				

In the above circuits, the auxiliary power and auxiliary marker lamp circuits are available on all vehicles, the remainder are available depending on the option content of the vehicle. And in some cases, even when an air dryer/moisture ejector has not been installed, this circuit could have been used for factory installed special equipment options. Therefore, it is important to check the option content to each vehicle prior to making the body/equipment wiring harnesses.

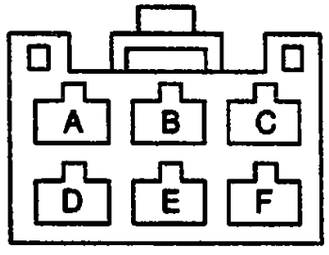
WIRING DIAGRAM BODY MOUNTING CIRCUITS



BODY BUILDERS HARNESS ELECTRICAL COMPONENT LOCATION TABLE

Component	Location	201–PG	Fig.	Conn
Auxiliary Relay	Center of the lower I/P, behind panel, in relay center 2	37	38	—
Body Builder Connector (1 cavity)	Inline connector in front chassis harness, by RH frame rail, inboard of batteries	—	—	—
Body Builder Connector (4 cavities)	Inline connector in front chassis harness, by RH frame rail, inboard of batteries	—	—	—
Body Builder Connector, Interior (6 cavities)	Inline connector in lower I/P harness, below I/P, left of center of cab	—	—	202-44
I/P Fuse Block	RH top of I/P, under access panel	36	37	—
Instrument Cluster	LH side of I/P	33	34	—
Joint Connector 1, Upper I/P	Upper I/P harness, under crash pad, top of I/P	—	—	—
Relay Center 2	Center of the lower I/P, behind panel	37	38	—
C200 (56 cavities)	Lower I/P harness to front chassis harness, left center of cab, in cab interface connector housing	13	14	202-5
C202 (56 cavities)	Lower I/P harness, to front chassis harness, left center of cab, in cab interface connector housing	13	14	202-8
C212 (84 cavities)	Lower I/P harness to upper I/P harness, LH center of I/P at floor	—	—	202-15
P100	Front chassis harness, underhood, center of bulkhead, in cab interface connector housing	13	14	—
S227	Upper I/P harness, under I/P, approximately 6 cm left of I/P Fuse Block breakout	—	—	—
S279	Lower I/P harness, below I/P, approximately 5 cm right of relay center 1 harness breakout	—	—	—
S292	Lower I/P harness, in main harness, at frame harness breakout	—	—	—
S309	Lower I/P harness	—	—	—
S318	Lower I/P harness	—	—	—
S319	Lower I/P harness	—	—	—
S320	Lower I/P harness	—	—	—
S323	Lower I/P harness	—	—	—

Body Builder Inline Connector



Connector Part Information		• 7147 5971	
Pin	Wire Color	Circuit No.	Function
A	BRN	317	Tail
B	ORN	319	Battery, direct
C	GRN	322	
D	YEL	318	Accessory
E	PNK	320	Switch Ignition
F	BLU	323	